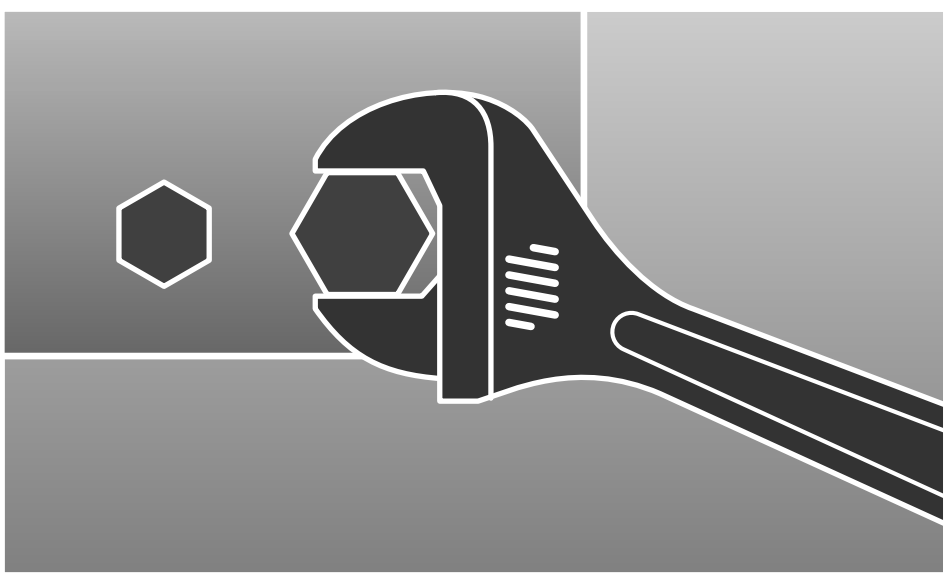
SAMSUNG

INSTALLATION MANUAL
MANUAL DE INSTALACIÓN
MANUEL D'INSTALLATION
MANUALE D'INSTALLZIONE
MANUAL DE INSTALAÇÃO
INSTALLATIONS-HANDBUCH
INSTALLATION MANUAL
INSTALLATION MANUAL

MH020FPEA
MH023FPEA
MH026FPEA
MH035FPEA
MH052FPEA
MH18VP2-09
MH19VP2-07
MH19VP2-12

Free Joint Multi Air Conditioner (Cool and Heat)
Acondicionador de aire libre del empalme multi (Refrigeración y Calefacción)
Climatiseur Free Joint Multi (Refroidissement et Chauffage)
Aria condizionata Free Joint Multi (Raffreddamento e Riscaldamento)
Free Joint Multi ar condicionado (Refrigeração e Aquecimento)
Free Joint Multi Klimaanlage (Kühlen und Wärmen)
Free Joint Multi Air Conditioner (Cool and Heat)
Free Joint Multi Air Conditioner (Cool and Heat)



ⒺⓈⒻⒾⓅⒹⒼⓇ DB98-20238A(2)

ENGLISH
ESPAÑOL
FRANÇAIS
ITALIANO
PORTUGUÊS
DEUTSCH
E§§HNIKA
RUSSIAN

Safety Precautions

The following safety precautions must be taken when using your air conditioner.

⚠ WARNING Risk of electric shock. • Can cause injury or death. • Disconnect all remote electric power supplies before servicing, installing or cleaning. • This must be done by the manufacturer or its service agent or a similar qualified person in order to avoid a hazard.

INSTALLING THE UNIT

- The unit should not be installed by the user. Ask the dealer or authorized company to install the units except room air conditioners for the U.S.A and Canada area.
- If the unit is installed improperly, water leakage, electric shock or fire may result.
- The air conditioner must be installed in accordance with national wiring regulations and safety regulations wherever applicable.
- Mount with the lowest moving parts at least 2.5m above the floor or grade level. (If applicable)
- The manufacturer does not assume responsibility for accidents or injury caused by an incorrectly installed air conditioner. If you are unsure about installation, contact an installation specialist.
- When installing the built-in type air conditioner, keep all electrical cables such as the power cable and the connection cord in pipe, ducts, cable channels e.t.c to protect them against liquids, outside impacts and so on.

POWER SUPPLY LINE, FUSE OR CIRCUIT BREAKER

- If the power cord of this air conditioner is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- The unit must be plugged into an independent circuit if applicable or connect the power cable to the auxiliary circuit breaker. An all pole disconnection from the power supply must be incorporated in the fixed wiring with a contact opening of >3mm.
- Do not use an extension cord with this product.
- If the unit is equipped with a power supply cord and a plug, the plug must be accessible after installation.
- This appliance must be installed accordance with the national wiring regulations.

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Deciding on Where to Install the Air Conditioner

When deciding on the location of the air conditioner with the owner, the following restrictions must be taken into account.

General

Do NOT install the air conditioner in a location where it will come into contact with the following elements:

- Combustible gases
- Saline air
- Machine oil
- Sulphide gas
- Special environmental conditions

If you must install the unit in such conditions, first consult your dealer.

Indoor Unit

- There must be no obstacles near the air inlet and outlet.
- Install the indoor unit on a surface that can support its weight.
- Choose a position that enables the piping and cables to be easily connected to the outdoor unit and the recommended length of 5 metres to be respected.
- Leave enough clearance beneath the indoor unit to enable the filters to be removed without hindrance.
- Maintain sufficient clearance around the indoor unit, as indicated in the diagram on the page opposite.
- Make sure that the water dripping from the drain hose runs away correctly and safely.

CAUTION

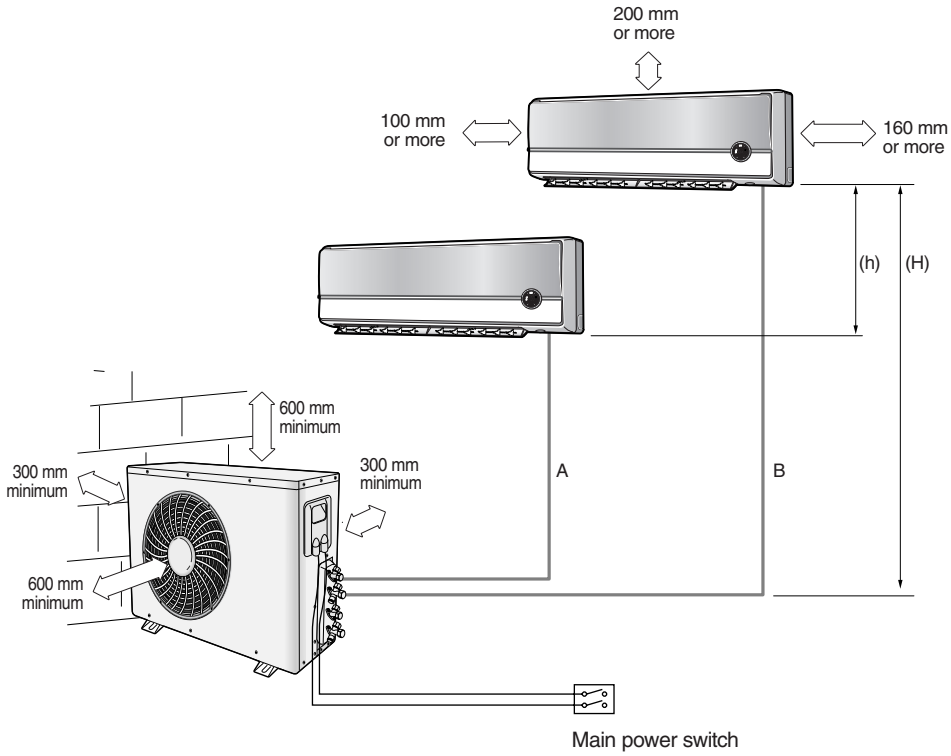
- **You have just purchased a Free Joint Multi air conditioner and it has been installed by your installation specialist.**
- **This device must be installed according to the national electrical rules.**
- **Max input power & current is measured according to IEC standard and input power & current is measured according to ISO standard.**

◆ MH18VP2X / MH19VP2X / MH052FXEA2

Indoor unit	Outdoor unit	Power supply Ø, V, Hz
✳✳020/026/035FP✳✳ ✳✳026/035FK✳✳	MH052FXEA2	1, 220-240, 50
✳✳18✳✳	MH18VP2X	
✳✳19✳✳	MH19VP2X	

◗ Piping outside diameter

Unit	Outside diameter	
	Liquid	Gas
✳✳20/26/35✳✳	1/4”	3/8”



◗ Piping length and the height

	1 Room max length	2 Room total max length	Max height between indoor unit & outdoor unit	Max height between indoor units
Dimension	20 m	40 m	15 m	3 m
Composition	A, B	A + B	(H)	(h)

Deciding on Where to Install the Air Conditioner (Continued)

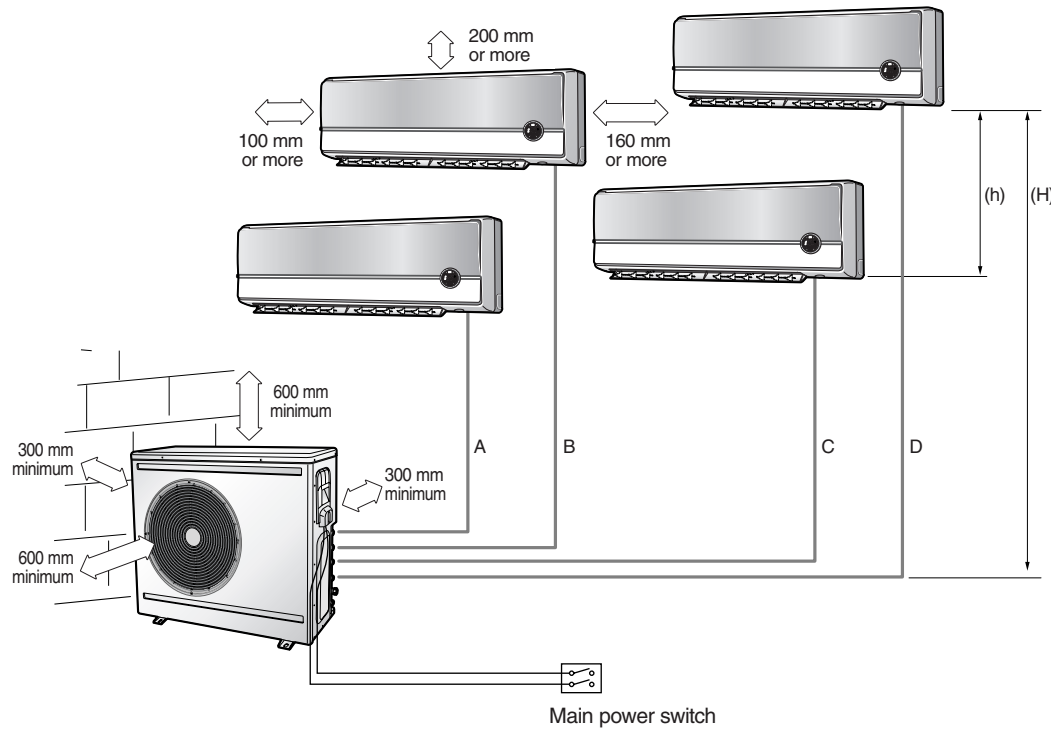
◆ MH068FXEA4 / MH080FXEA4

※ The split type, 1-way cassette, duct type indoor units can be installed together.

Indoor unit	Outdoor unit	Power supply Ø, V, Hz
✳✳23/26/35/52✳✳	MH068FXEA4 MH080FXEA4	1, 220-240, 50

◗ **Piping outside diameter**

Unit	Outside diameter	
	Liquid	Gas
✳✳23/26/35✳✳	1/4”	3/8”
✳✳52✳✳	1/4”	1/2”



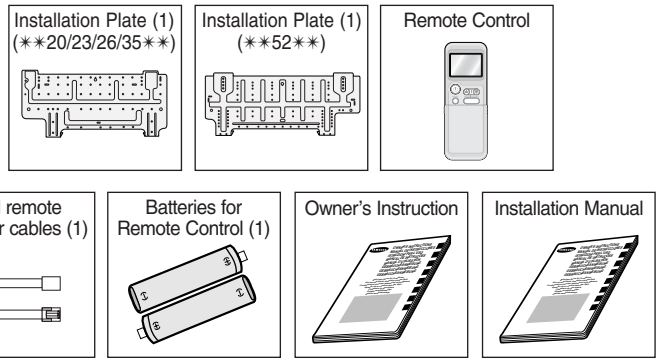
◗ **Piping length and the height**

	1 Room max length	2 Room total max length	3 Room total max length	4 Room total max length	Max height between indoor unit & outdoor unit	Max height between indoor units
Dimension	25 m	30 m	45 m	70 m	15 m	3 m
Composition	A, B, C, D	A + B	A + B + C	A + B + C + D	(H)	(h)

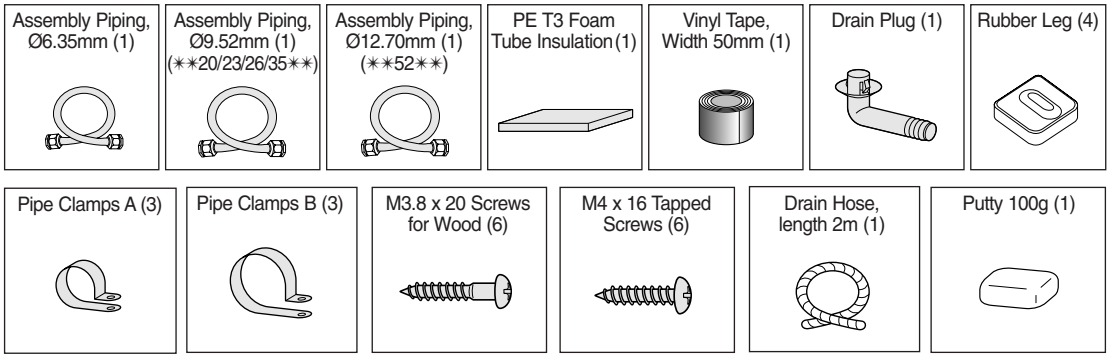
Air Conditioner and Accessories

The following accessories are supplied with the air conditioner.

Accessories in the Indoor Unit Case

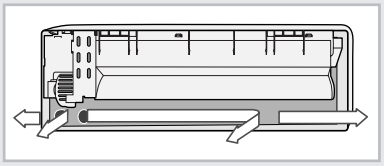


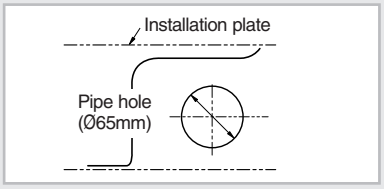
The following connection accessories may be supplied, depending on the option. If they are not supplied, it is recommended that you collect them together before starting to install the air conditioner.



➢ **If these accessories are supplied, they are located in the accessory box.**

Fixing the Installation Plate





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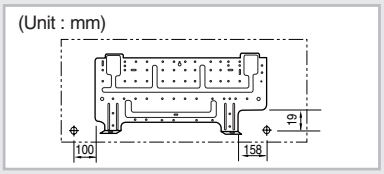

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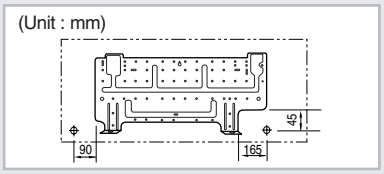

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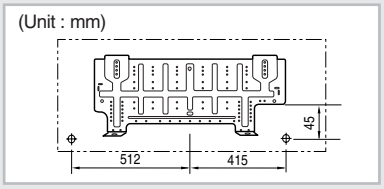


Before fixing the installation plate to a wall or window frame, you must determine the position of the 65 mm hole through which the cable, piping and hose pass to connect the indoor unit up to the outdoor unit. When facing the air conditioner in position on the wall, the piping and cable can be connected from the:

- **Right**
- **Left**
- **Rear (right or left)**
- **Underside**

1 Determine the position of the pipe and drain hose hole using the right figure and drill the hole with an inner diameter of 65 mm so that it slants slightly downwards.

2

If you are fixing the indoor unit to a...	**Then follow Steps...**
Wall	**3**.
Window frame	**4** to **6**.

3 Fix the installation plate to the wall in a manner appropriate to the weight of the indoor unit.

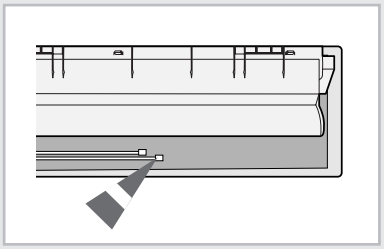
➢ If you are mounting the plate on a concrete wall with anchor bolts, the anchor bolts must not project by more than 20 mm.

4 Determine the positions of the wooden uprights to be attached to the window frame.

5 Attach the wooden uprights to the window frame in a manner appropriate to the weight of the indoor unit.

6 Using tapped screws, attach the installation plate to the wooden uprights, as illustrated in the last figure opposite.

Purging the Unit



On delivery, the indoor unit is loaded with an inert gas. All this gas must therefore be purged before connecting the assembly piping. To purge the inert gas, proceed as follows.

Unscrew the caps at the end of each pipe.

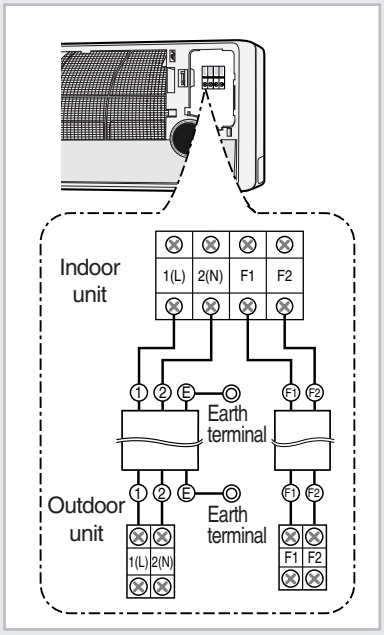
Result: All inert gas escapes from the indoor unit.

➢ **To prevent dirt or foreign objects from getting into the pipes during installation, do NOT remove the caps completely until you are ready to connect the piping.**

Connecting the Assembly Cable

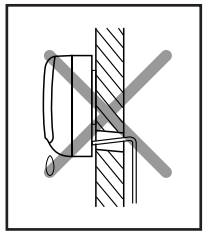
The indoor unit is powered from the outdoor unit via the assembly cable.

1	Extend the assembly cable if necessary.
2	Open the front grille by pulling on the tabs on the lower right and left sides of the indoor unit.
3	Remove the screw securing the connector cover.
4	Pass the assembly cable through the rear of the indoor unit and connect the assembly cable such as figure. ➢ Each wire is labelled with the corresponding terminal number.
5	Pass the other end of the cable through the 65 mm hole in the wall.
6	Replace the connector cover, carefully tightening the screw.
7	Close the front grille.
8	For further details on how to plug the other end of the assembly cable into the outdoor unit, refer to installation manual of the outdoor unit.

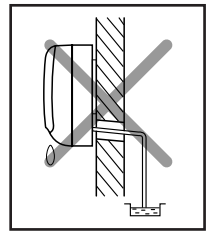


Installing and Connecting the Indoor Unit Drain Hose

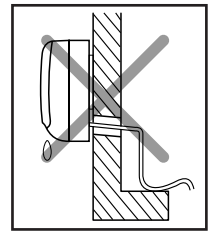
Care must be taken when installing the drain hose for the indoor unit to ensure that any condensation water is correctly drained outside. When passing the drain hose through the 65 mm hole drilled in the wall, check that none of the following situations occur.



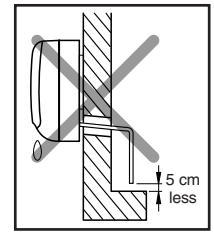
The hose must NOT slope upwards.



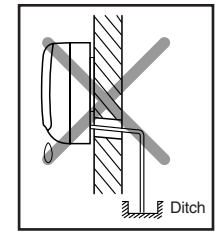
The end of the drain hose must NOT be placed in water.



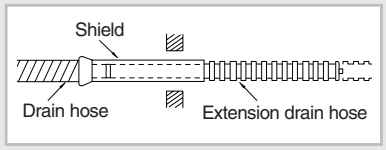
Do NOT bend the hose in different directions.



Keep a clearance of at least 5 cm between the end of the hose and the ground.



Do NOT place the end of the drain hose in a hollow.



To install the drain hose, proceed as follows.

1	If necessary, connect the 2-meter extension to the drain hose.
2	If you are using the extension, insulate the inside part of the extension drain hose with a shield.
3	Pass the drain hose under the refrigerant piping, taking care to keep the drain hose tight.
4	Pass the drain hose through the hole in the wall, making sure that it is sloping downwards, as shown in the illustrations above.

➢ **The hose will be fixed permanently into position once the whole installation has been tested for gas leaks; refer to installation manual of the outdoor unit.**

Installing and Connecting the Indoor Unit Assembly Piping

There are two refrigerant pipes of different diameters:

- **A smaller one for the liquid refrigerant**
- **A larger one for the gas refrigerant**

A short length of piping is already fitted to the air conditioner. You must extend this piping using assembly piping (optionally supplied).

The connection procedure for the refrigerant piping varies according to the exit position of the piping from the indoor unit, as seen when facing the air conditioner in position on the wall:

- **Right(A)**
- **Left(B)**
- **Underside(C)**
- **Rear**

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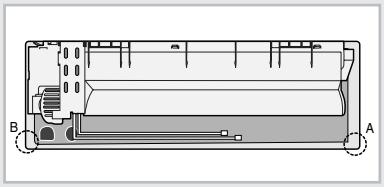
MH19VP2-07/MH19VP2-12



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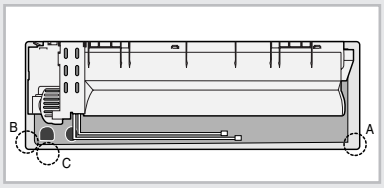


1 With a knife, cut out the appropriate knock-out piece on the rear of the indoor unit (unless you are connecting directly from the rear).

2 Smooth the cut edges.

3 Remove the protection caps on the pipes and connect the assembly piping to each pipe, tightening the nuts, first manually and then with a torque wrench, applying the following torque.

Outer Diameter	Torque(kgf•cm)
6.35 mm	140~170
9.52 mm	250~280
12.70 mm	380~420

➢ If the piping must be shortened or extended, refer to page 12.

4 Cut off any excess foam insulation.

5 If necessary, bend the pipe round, along the bottom of the indoor unit and out through the appropriate hole, taking care to ensure that:
- The piping does not jut out from the rear of the indoor unit.
- The bending radius is 100 mm or more.

6 Pass the piping through the hole in the wall.

7 For further details on how to connect up to the outdoor unit and purge the circuit, refer to installation manual of the outdoor unit.

➢ **The piping will be insulated and fixed permanently into position once the whole installation has been tested for gas leaks; refer to installation manual of the outdoor unit.**

Cutting/Extending the Piping

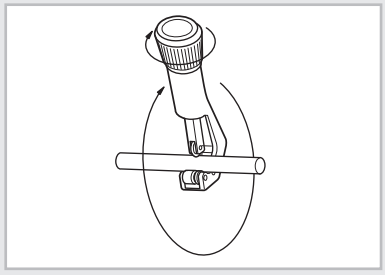
7.5 metres of piping is supplied with the air conditioner(Optional). This length can if necessary be:

- **Extended to a maximum length**
- **Shortened as required**

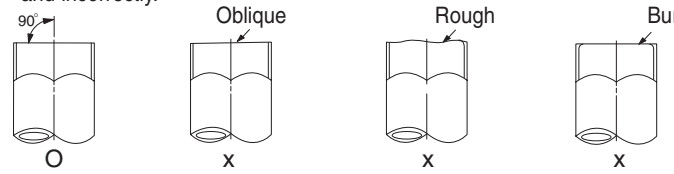
☛ **If more than 7.5 metres of piping is required:**

- **The assembly cable must also be extended**
- **Refrigerant must be added to the circuit by an approved installer; otherwise, the indoor unit may freeze**

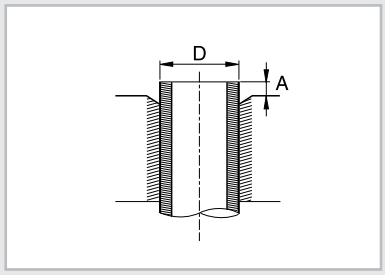
1 Make sure that you have the required tools available (pipe cutter, reamer, flaring tool and pipe holder).



2 If you wish to shorten the piping, cut it using a pipe cutter, taking care to ensure that the cut edge remains at a 90° angle with the side of the pipe, and referring to the illustrations below for examples of edges cut correctly and incorrectly.



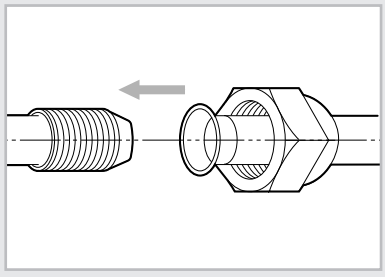
3 To prevent any gas from leaking out, remove all burrs at the cut end of the pipe, using a reamer.



4 Slide a flare nut on to the pipe and modify the flare.

Outer Diameter(D)	Depth(A)
6.35 mm	1.3 mm
9.52 mm	1.8 mm
12.70 mm	2.0 mm

5 Check that the flaring is correct, referring to the illustrations below for examples of incorrect flaring.



6 Align the pipes to be connected and tighten the flare nuts first manually and then with a torque wrench, applying the following torque.

Outer Diameter	Torque(kgf•cm)
6.35 mm	140~170
9.52 mm	250~280
12.70 mm	380~420

7 For further details on how to connect up to the outdoor unit and purge the circuit, refer to installation manual of the outdoor unit.

Placing the Indoor Unit in Position

Once you have checked that there are no leaks in the system, you can insulate the piping, hose and cables and place the indoor unit on the installation plate.

1 To avoid condensation problems, place heat-resistant polyethylene foam separately around each refrigerant pipe in the lower part of the indoor unit.

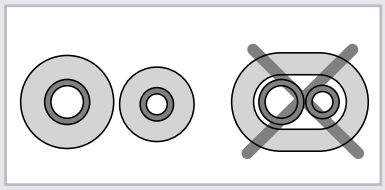
2 Wind insulating tape around the pipes, assembly cable and drain hose.

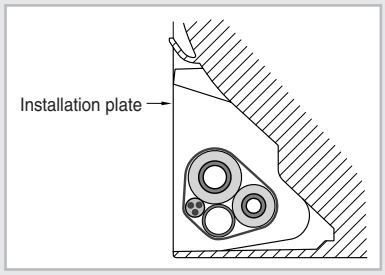
3 Place the resulting bundle carefully in the lower part of the indoor unit, making sure that it does not jut out from the rear of the indoor unit.

4 Hook the indoor unit on to the installation plate and move the unit to the right and left until you are sure that it is securely in place.

5 Finish wrapping vinyl tape around the rest of the piping leading to the outdoor unit.

6 Using clamps (optionally supplied), attach the piping to the wall wherever possible.





Assigning Address to Indoor Unit

1 Before installing the indoor unit, assign an address to the indoor unit according to the air conditioning system plan.

2 The address of the indoor unit is assigned by adjusting MAIN(SW02).

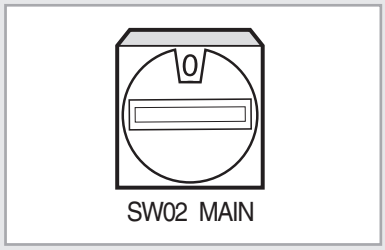
✻ You don't have to assign the MAIN address when installing one indoor unit for one outdoor unit.

3 The MAIN address is for communication between the indoor unit and the outdoor unit. Therefore, you must set it to operate the air conditioner properly.

4 It is required to set the RMC address if you install the wired remote controller and/or the centralized controller.

5 If you install optional accessories such as the wired remote controller, centralized controller, etc. see an appropriate installation manual.

6 Refer to the outdoor unit installation manual for the details.

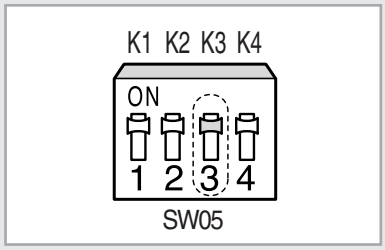


Additional Functions

Compensation for lost temperature in heating operation

◆ Reduces the difference between an actual room temperature and a sensed temperature by the air conditioner when heating.

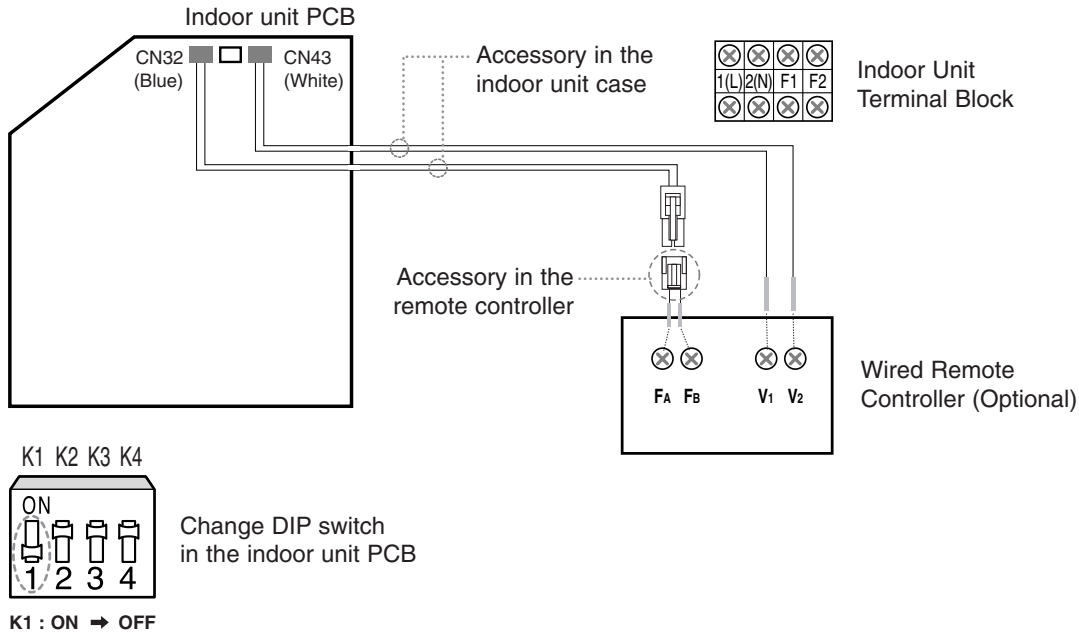
Switch No.	Switch ON	Switch OFF
K3	2°C compensation	5°C compensation



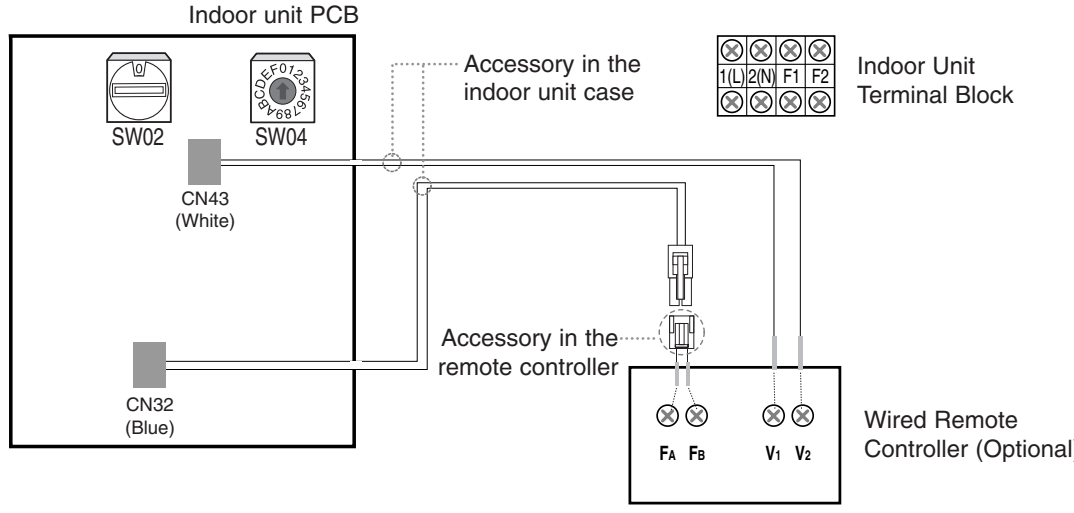
Wiring Wired Remote Controller (Optional)

Connect the power cable, which is connected with the outdoor unit and supplied by another source, making sure that the power cable terminal should not be changed.
Since the communication cable has the polarities, be careful to connect the terminal of F1, F2 and FA, FB rightly.

MH020FPEA / MH023FPEA / MH026FPEA / MH035FPEA / MH18VP2-09 / MH19VP2-07 / MH19VP2-12



MH052FPEA



➢ **Dashed cables are not supplied as accessories.**

Troubleshooting

The error indicated on the display panel of indoor unit

Display	Explanation	Remark
E101	Communication errors in the indoor unit	
E102	Communication errors in the outdoor unit	
E121	Indoor unit room temperature sensor error (Open/Short)	
E122	Inlet pipe temperature sensor error in the indoor unit heat exchanger (Open/Short)	
E123	Outlet pipe temperature sensor error in the indoor unit heat exchanger (Open/Short)	
E154	Indoor fan motor malfunction	
E161	More than 2 indoor units cool and heat simultaneously	
E162	EEPROM error	
E163	EEPROM option setting error	
E201	The number of indoor unit mismatched	
E185	Communication cable and power cable misconnected	

Explaining Operations to the Owner

Before leaving the premises on which you have installed the air conditioner, you should explain the following operations to the owner, making reference to the appropriate pages in the owner's instruction booklet.

1	How to start and stop the air conditioner.
2	How to select the operating mode and adjust the temperature and fan settings.
3	How to adjust the air flow direction.
4	How to set the timers.
5	How to remove and clean the filters.

➢ **Once the owner is happy with the basic operations, hand over the owner's instruction booklet and this installation manual for storage in a handy and safe place.**

THIS AIR CONDITIONER IS MANUFACTURED BY:
ESTE AIRE ACONDICIONADO HA SIDO FABRICADO POR:
CE CLIMATISEUR EST FABRIQUE PAR:
QUESTO CONDIZIONATORE D'ARIA È PRODOTTO DA:
ESTE APARELHO DE AR CONDICIONADO É FABRICADO POR:
DIESE KLIMAANLAGE IST FABRIZIERT VON:
AYTH H ™Y™KEYH KATA™KEYA™THKE A¶O :
THIS AIR CONDITIONER IS MANUFACTURED BY:

SAMSUNG ELECTRONICS